

Notice of Allowability

Application No.

10/804,027

Examiner

Alexander S. Beck

Applicant(s)

SHIOMI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communications filed on 9 August 2007.
2. ☒ The allowed claim(s) is/are 4-6, 8, 14 and 24.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20071026.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 20040319; 20040621; 20060303; 20070103; 20070627.

DETAILED ACTION

Election/Restrictions

1. Acknowledgment is made of the response to election requirement filed by the applicant on October 9, 2007, in which: Species D directed to Figure 19 is elected without traverse; claim 14 is identified as readable on Species D; and claim 4 is identified as generic. This application is in condition for allowance except for the presence of claims 1-3, 7, 9-13, 15-23, 25, 26 and 28-111 directed to a species non-elected without traverse. Accordingly, claims 1-3, 7, 9-13, 15-23, 25, 26 and 28-111 have been cancelled.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statements filed on March 19, 2004, June 21, 2004, March 3, 2006, January 3, 2007, and June 27, 2007, have been acknowledged and considered by the examiner. Initialed copies of the PTO-1449 are included in this correspondence.

Examiner's Amendment

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Scott A. Elchert on October 26, 2007, and October 30, 2007.

The application has been amended as follows:

Claim 24. (Examiner's Amendment) A computer readable medium having a program stored thereon, the program, when run on a computer, adapted to cause the computer to execute the method of claim 4.

Claims 1-3, 7, 9-13, 15-23, and 25-111 are cancelled.

(Note: Claim 24 is amended to overcome 35 U.S.C. 101 issues regarding non-statutory subject matter. Claim 27, dependent upon claim 24, is cancelled for failing to further limit newly amended claim 24. Independent claim 4, generic to species B, D and F directed to Figures 16, 19 and 21, respectively, is in condition for allowance. All claims dependent therefrom, including claim 14, are in condition for allowance as well. As such, claims 4-6, 8, 14 and 24 are allowed. Claims 1-3, 7, 9-13, 15-23, 25, 26 and 28-111, directed to a non-elected species, are cancelled for the purposes of placing the application in condition for allowance.)

Allowable Subject Matter

5. Claims 4-6, 8, 14 and 24 are allowed.

6. The following is an examiner's statement of reasons for allowance:

U.S. Patent No. 6,952,192 to Ohmuro et al. ("Ohmuro") discloses a method for driving a liquid crystal display apparatus including a liquid crystal cell of vertically aligned mode driven in a normally black mode. (Ohmuro at col. 11, ll. 15-28.) The method of Ohmuro corrects a driving voltage for displaying grayscale values for improving and shortening a response time of the display. (Ohmuro at col. 12, ll. 22-33.) U.S. Patent No. 6,791,525 to Matsumura et al. ("Matsumura") discloses a method for correcting a desired target gradation (k) so as to facilitate a gradation transition from a current gradation (k-1) to the desired target gradation (k).

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(Matsumura at Abstract.) In a third embodiment, Matsumura discloses a mode of operation, wherein: if the target image data (k) is equal to the current corrected data (k-1), then the target image data is generated as the target corrected data; if the target image data (k) is higher than the current corrected data (k-1), then a data value greater than the target image data is generated as the target corrected data; and if the target image data (k) is lower than the current corrected data (k-1), then a data value lower than the target image data is generated as the target corrected data. (Matsumura at col. 9, ll. 57-67.) Furthermore, target corrected data is generated by adding or subtracting values to/from the target gradation. (Matsumura at col. 9, ll. 52-57.) Alternatively, Matsumura discloses wherein previous data (k-2) and current data (k-1) may be inputted together as current corrected data for the purposes of determining target corrected data. (Matsumura at col. 10, ll. 26-31.)

However, neither Ohmuro, Matsumura, or any of the prior art made of record, teaches or suggests facilitating a gradation transition from a current gradation (k-1) to a desired target gradation (k) by first judging whether or not a combination of the current gradation and the desired target gradation corresponds to a predetermined first combination, whereby the first combination causes a time required for a gradation in a second area of a pixel to reach a second target gradation to become not less than a predetermined second tolerance (i.e. wherein tolerance is measured by time), when facilitating the gradation transition to such a degree that a gradation in a first area of the pixel does not exceed a predetermined first tolerance indicative of a first target gradation (i.e. wherein tolerance is measured by gradation). Furthermore, none of the prior art teaches or suggests wherein the first combination also causes the gradation in the second area of the pixel to exceed the first tolerance, when facilitating the gradation transition to such a

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degree that a time required for gradation in the first area of the pixel to reach the first target gradation becomes less than the second tolerance, as presently claimed. And although Matsumura discloses the use of previous gradation (k-2), current gradation (k-1) and target gradation (k) in determining whether to add or subtract values to/from the desired target gradation, none of the prior art made of record teaches or suggests adding a first predetermined value to the desired target gradation (k) when the combination of the current gradation (k-1) and the desired target gradation corresponds to the first combination, and subtracting a second predetermined value from the current gradation (k-1) when a combination of the current gradation (k-1) and a previous gradation (k-2) corresponds to the first combination, as presently claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander S. Beck whose telephone number is (571) 272-7765. The examiner can normally be reached on M-F, 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

asb
October 30, 2007



SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER